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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/783,867	02/19/2004	Albert R. Harvey	2507-5732.2US (21806-US-0)	7545
24247	7590	09/28/2006	EXAMINER	
TRASK BRITT P.O. BOX 2550 SALT LAKE CITY, UT 84110			NUTTER, NATHAN M	
			ART UNIT	PAPER NUMBER

1711

DATE MAILED: 09/28/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/783,867

Applicant(s)

HARVEY ET AL.

Examiner

Nathan M. Nutter

Art Unit

1711

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 August 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 45-76 is/are pending in the application.
- 4a) Of the above claim(s) 62-76 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 45-61 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION***Claim Interpretations***

The claims recite an apparatus that comprises a product, being a “shear ply” which is defined in the claims as being “a rubber component cured from a precursor composition.” The claim recitations then define what is included in the composition. The only constituent to which patentability may be ascribed would be in the composition of the “shear ply” and not to any arrangement thereof in a rocket motor since there are insufficient details and disclosure to show any such construction. As such, the claims will be viewed in this context, with the patentable subject matter being dictated by the composition. As such, identically taught compositions that exhibit the desired properties of “sufficient flexion, strength, and high-temperature properties,” as disclosed herein at paragraphs [0008] et al., will be deemed to be usable. The references to Kinoshita et al (US 6,132,328) and Onaka et al (US 6,240,993) are cited to show the conventionality of the resin blends, as disclosed and claimed herein. Applicants’ complaint that the interpretation is too narrow, “the phrase ‘shear ply’ has a broader meaning is irrelevant in view of the statement “(t)he claim recitations then define what is included in the composition.”

Specification

The amendment filed 14 August 2006 is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added

Art Unit: 1711

material which is not supported by the original disclosure is as follows: the recitations of newly added paragraph [0021.1] and the attendant added Figure 5 have no support in the Specification as originally filed. Further the newly added sentence in paragraph [0035] is deemed to be new matter, having no support in the Specification as originally filed.

Applicant is required to cancel the new matter in the reply to this Office Action.

Response to Amendment

In response to the amendment filed 14 August 2006, the rejection of claims 45-56 and 58-61 on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-27 of U.S. Patent No. 7,012,107 (Harvey et al), is hereby expressly withdrawn.

All other rejections are being maintained.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 45-61 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the

Art Unit: 1711

invention. There is no disclosure to teach the "rocket motor assembly," as herein recited and claimed. No guidance is given as to what the "rocket motor assembly" may comprise, or even how it is made. The disclosure is drawn to a composition that may be used in "high temperature shear ply applications," paragraph [0002]. Nothing specific is shown wherein the assembly of a rocket motor is taught. As such, the artisan would be required to proceed under the undue burden of experimentation to determine what is being claimed.

Claims 58 and 59 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The recitations as to hydrogenation saturation are not shown in the Specification, as originally filed.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 45-61 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The recitation of the "rocket motor assembly," is not clear as to its proper metes and bounds. No guidance is given as to what the "rocket motor assembly" may comprise, or even how it is made, and, as such, the claims are deemed to be vague and

Art Unit: 1711

confusing. Nothing is provided as to the "shear ply interposed between a rocket motor case and a skirt" as to what is being claimed.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 45-61 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jonen et al (US 5,860,883), Onaka et al (US 6,240,993), Morris et al (US 6,352,488), Billups (US 6,443,866) or Nagata et al (US 6,739,854).

Each of the references to Jonen et al (US 5,860,883), Kinoshita et al (US 6,132,328), Onaka et al (US 6,240,993), Morris et al (US 6,352,488), Billups (US 6,443,866) and Nagata et al (US 6,739,854) teaches the manufacture of power transmission belts that may comprise a first hydrogenated nitrile conjugated-diene copolymer modified by a metal salt unsaturated carboxylic acid ester, a second hydrogenated nitrile conjugated-diene copolymer and a curing agent, as recited and claimed herein. The constituents are shown to be conventional with the final product possessing "flexion, strength, and high-temperature properties" as required for power transmission belts.

The reference to Jonen et al (US 5,860,883) shows the resin blend of a first modified hydrogenated nitrile rubber with a second hydrogenated nitrile rubber at

Art Unit: 1711

column 2 (lines 17-64), column 3 (lines 33-39) and column 6 (lines 13-31). The curing agent, including the peroxide of claim 55, is also shown at column 8 (lines 47-57). The choice of the nitrile rubber constituents, whether it be acrylonitrile or methacrylonitrile or particular diene, is not shown to be critical since all of these constituents are conventional and known. The metal salt carboxylic acid esters employed are taught at column 6 (lines 32-43) to include those recited and claimed. the fibers employed are shown at column 9 (lines 36-48).

The reference to Morris et al (US 6,352,488) shows the contemplated blend at column 2 (lines 56-65) and column 4 (lines 3-10). The peroxides employed are taught at column 3 (lines 44-65). The modified nitrile rubber is shown at column 3 (lines 12-26). Fibers may be employed though not those specifically recited in claims 60 and 61. Note column 3 (lines 44-65).

The reference to Billups (US 6,443,866) teaches the claimed blend at column 2 (lines 31-41) and the curing agent at column 2 (lines 44-64).

The patent to Nagata et al (US 6,739,854) shows the contemplated combination at column 4 (lines 54-60). A reinforcing fiber may be added at column 5 (lines 8 et seq.).

The references alone and collectively show the blend of resins and the various aspects of these compositions as including those parameters as recited and herein claimed. Though the references are not drawn to the concept of a rocket motor assembly, per se, they are drawn to compositions suitable for use as the shear ply of a motor assembly, as disclosed and claimed herein. as such, the instantly claimed

Art Unit: 1711

invention would have been obvious to a skilled artisan at the time the invention was made.

Response to Arguments

Applicant's arguments filed 14 August 2006 have been fully considered but they are not persuasive.

With regard to the rejection of claims 45-61 under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement, applicants point to various paragraphs in the Specification for support of a rocket motor assembly but fail to convincingly show such. Each of the paragraphs pointed to broadly discuss one aspect of a very vague assembly. As such, paragraph [0003] is drawn only to an outer casing, paragraph [0005] is drawn only to a rocket skirt, paragraphs [0008]-[0009] are drawn only to a shear ply with description of use but not structure, paragraph [0014] is drawn only to an embodiment of the invention, providing no structural details, paragraph [0015] is drawn only to defining possible rubber materials for use, but no structure, paragraph [0035] is drawn to making a ply material, but, again no structure, and paragraph [0047] is drawn to making a shear ply, but, once more, there are no details as to structure of any rocket motor assembly. Applicants attempt to insert the information by new matter with Figure 5, added improperly, and the attendant discussion, also improperly added.

With regard to the rejection of claims 58 and 59 under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement, it is pointed out

Art Unit: 1711

that the paragraph [0038] that applicants contend show the ranges recited in the claims does not show such. The ranges have no antecedent basis in the Specification, as filed, and have not been shown by applicants.

With regard to the rejection of claims 45-61 under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention, the Specification, as alleged by applicants to show such assembly, does not give adequate details to particularly point to what applicants consider their invention. The various paragraphs pointed to do not provide details that are clear. Thus, the claims are deemed to be vague and confusing.

With regard to the rejection of claims 45-61 under 35 U.S.C. 103(a) as being unpatentable over Jonen et al (US 5,860,883), Onaka et al (US 6,240,993), Morris et al (US 6,352,488), Billups (US 6,443,866) or Nagata et al (US 6,739,854), it is pointed out that any patentability to the claims resides in the composition, per se. Applicants tacitly acknowledge this with the amendment to claim 45 regarding the second hydrogenated nitrile copolymer. The composition is shown by either of the references. The rejections are separate, so the Examiner does not need to provide any "motivation to combine" as alleged by applicants. Applicants fail to argue the merits of the rejections and imply that the instant claims are patentable over the references because they fail to show a rocket motor assembly. This is the same reason that the rejections are made herein under 35 USC 112, because applicants fail to show such assembly, as well.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

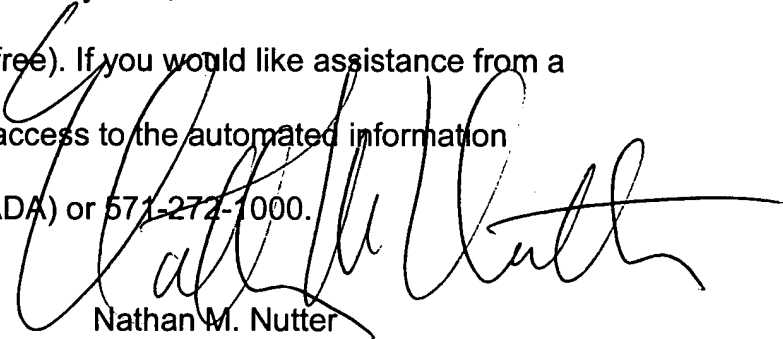
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nathan M. Nutter whose telephone number is 571-272-1076. The examiner can normally be reached on 9:30 a.m.-6:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James J. Seidleck can be reached on 571-272-1078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1711

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Nathan M. Nutter
Primary Examiner
Art Unit 1711

nmn

24 September 2006